Amendments to the Specification:

Paragraph beginning on page 1, line 11

Optical communication systems are becoming more and more widespread mainly due to the very large bandwidths they have for carrying information. The growth and diversity of lightwave networks, such as Wavelength Division Multiplexed (WDM) networks are placing new demands on all aspects of optical networks including, for example, capacity management and provisioning, maintenance, and reliable and robust operation. In addition, the current trend in many carrier networks is to implement standard IP based networks to achieve convergence of traditionally separate voice and data networks. To this end, the use of Ethernet based equipment in ~~implanting~~ implementing carrier networks is becoming increasingly common.

Paragraph beginning on page 1, line 23

Wavelength division multiplexed (WDM) optical networks are particularly desirable because of their restoration capabilities and suitability for minimizing the optical fiber length for the interconnection of system nodes. A typical WDM optical ring network includes network elements with optical add/drop, multiplexor/demultiplexors (ADMs), etc., whereby some optical channels are dropped, some are added and/or other channels are expressed or passed through. In a ring topology each ring node is connected to exactly two other ring nodes. [[The]] ADMs are used to construct a ring network whereby adjacent ADMs are connected pair wise while the network nodes are situated ~~so as~~ to form a ring. In a ring network, any node can be reached from any other node using two physically separate paths, i.e. one traveling clockwise and one traveling counter clockwise. This is used for providing protection against route failures. The use of at least two parallel fibers with traffic flowing in opposite directions provides restoration capabilities in the event of a fiber cut break.

Paragraph beginning on page 2, line 3

An ADM functions to filter or drop one or more wavelengths transiting on the ring. The optical technologies ~~usable for producing~~ useful in implementing an ADM can be placed in two main categories, namely: (1) those using fixed filtering, whereby an ADM is ~~produced~~ employed for dropping and adding a fixed wavelength, and (2) those using tunable filtering, whereby an external control determines the wavelength of the dropped and added channel.

Paragraph beginning on page 3, line 3

Conventional optical ring networks support communication using WDM and DWDM. A block diagram illustrating MAC based transmission in a conventional prior art optical ring network comprising a plurality of Optical Add/Drop Multiplexers (OADMs) is shown in Figure 2. In this optical network, a plurality of nodes 30 is connected by pairs of optical ~~fiber~~ fibers. Each node comprises at least two OADMs 32, 38, one for each direction of the ring.

Paragraph beginning on page 4, line 8

~~This~~ As a consequence, this type of ring architecture ~~thus~~ cannot support direct MAC-to-MAC communications. Using this prior art configuration, data in one of either two directions (i.e. receive or transmit) will arrive at the correct MAC device. This limitation prevents wavelength re-use around the ring, since the wavelength for a particular connection must be preserved to permit communications from MAC to MAC.

Paragraph beginning on page 5, line 19

Thus, the invention enables [[the]] direct MAC-to-MAC transmission over optical rings that employ wave division multiplexing. Each MAC device in a node is connected ~~so as~~ to permit direct communications with another MAC device located in a neighboring node on the optical ring.

Paragraph beginning on page 5, line 30

This embodiment also enables direct MAC-to-MAC transmission over optical rings employing wave division multiplexing. Each MAC device in a node is connected ~~so as~~ to permit direct communications with another MAC device located in a neighboring node on the optical ring.

Paragraph beginning on page 11, line 16

For illustration purposes, the principles of the present invention are described in the context of an example node embodiment employing at least two ADMs corresponding to a single wavelength. Throughout this document, the term add drop multiplexer means transmission equipment which adds and ~~drop~~ drops information from an optical ring to/from one or more switching elements. It is noted that although the invention is described in the context of OADMs, the invention is not limited thereto. The invention is applicable to any type of wavelength based multiplexing/demultiplexing device. Thus, the term OADM is intended to refer to any wavelength based multiplexing/demultiplexing device.

Paragraph beginning on page 13, line 14

Traffic from neighboring node B enters node A via optical fiber 110 to OADM 98. A channel 85 having a particular wavelength is dropped via drop module 102 in OADM 98. The channel 85 dropped [[in]] is input to the receiver 106 of MAC device 104. Traffic returning to node B via optical fiber 116 is provided by the transmitter 108 in MAC device 104. The channel 87 is added to the multiple wavelength optical output by the add module 86 in OADM 82. The MAC device 104 is connected to the Ethernet device 94 via connection 93. The Ethernet device functions to connect the MAC device 104 to an Ethernet TCP/IP based network (not shown), such as the Internet.

Paragraph beginning on page 13, line 29

Note that each OADM is adapted to drop and add a particular wavelength. Additional wavelengths can be handled using additional OADMs, each adapted to drop and add a different wavelength. Each pair of OADMs ~~have~~ has associated with ~~them~~ it a complimentary pair of MAC devices configured in accordance with the present invention.

Paragraph beginning on page 15, line 8

On the other side of node A, traffic from neighboring node B enters node A via optical fiber 134 to OADM 140. A channel 146 having a particular wavelength is dropped via drop module 144 in OADM 140. The channel 146 dropped [[in]] is input to the receiver 146 of MAC device 150. Traffic returning to node B via optical fiber 132 is provided by the transmitter 154 in MAC device 150. The channel 148 is added to the multiple wavelength optical output by the add module 142 in OADM 140. The MAC device 150 is connected to the Ethernet device 166 via connection 163. The Ethernet device functions to connect the MAC device 150 to an Ethernet TCP/IP based network (not shown), such as the Internet.

Paragraph beginning on page 15, line 20

Thus, the second embodiment of the present invention described above enables direct MAC-to-MAC transmission over optical rings that employ wave division multiplexing. Each MAC device in a node is connected so as to permit direct communications with another MAC device located in a neighboring node connected to the same segment of the optical ring on the optical ring.